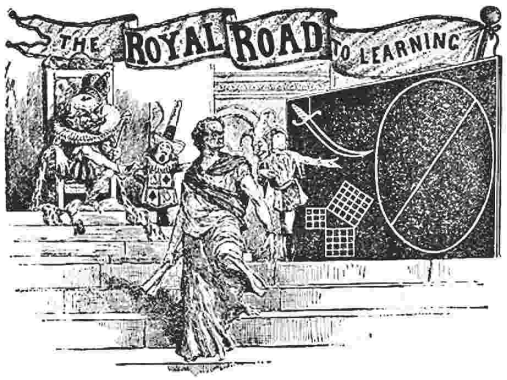
Problem E: The Royal Road to Learning (I)

One day King Ptolemy was receiving a lesson in mathematics by Euclid himself, when all of a sudden the monarch interrupted his tutor, complaining about the dullness of the subject and refusing to memorise the rules that were being imparted to him.



To the right — dividing the circle

Beppo, the court jester, offered to help with his own methods, explaining: "Pupils should not be made to commit rules to memory; everything should be explained so that they can formulate rules in their own language. A pedagogue who teaches rules would be a good one to train parrots!"

"Mathematics, which constitutes the most important branch of learning, forms the groundwork of the arts and sciences and is so essential to the successful man of affairs, as well as the development of a clear brain, that parents should realise the advantage of encouraging an early love for puzzles, tricks and problems among their children."

"With the kind permission of your majesty" continued Beppo, "we will now elucidate the subdivision of the circle by asking the court crier to show into how many pieces it is possible to divide a pancake with seven straight cuts of a knife…"

The question for you now is, what is the maximum number of pieces you can get after making N straight cuts to a pancake?

Input

Input starts with a positive integer **T**, that denotes the number of test cases.

Each test case is given in a line that contains a single integer **N**.

$T \leq 20000$; $0 \leq N \leq 10^9$

Output

For each test case, print the case number followed by the number of pieces that you can get from a pancake with N straight cuts.

Sample Input	Output for Sample Input
2 7 2	Case 1: 29 Case 2: 4